UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/840,497	04/23/2001	Samuel T. Barone JR.	42244/JEC/M770	4459

23363   7590   08/11/2006

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ART UNIT	PAPER NUMBER
2623	

DATE MAILED: 08/11/2006

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PTO-90C (Rev. 10/03)

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BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Application Number: 09/840,497
Filing Date: April 23, 2001
Appellant(s): BARONE ET AL.

BARONE ET AL.
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 05/18/2006 appealing from the Office action

mailed 02/03/2006.

(1) Real Party in interest

A statement identifying the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings, which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

The following is a listing of the evidence (e.g., patents, publications, Official

Notice, and admitted prior art) relied upon in the rejection of claims under appeal.

Bertram (US 2002/0064177)

Feinleib (US 6,637,032)

Bauchot (US 6,141,336)

Landis (US 5,428,400)

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 103

1.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2.   Claims 1-10 and 17-22 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Bertram (US 2002/0064177) in view of Feinleib (US 6,637,032).

Considering claim 1, Bertram discloses an interactive television (ITV) system

(paragraph 0058, lines 4-13) comprising: a first input for receiving a first data stream; a

second input for receiving a second data stream (T_{IN1} and T_{IN2} in figure 6--paragraph

0044, lines 1-5); the first data stream having a higher priority than the second data

stream (the priority is predefined: merging two data streams by inserting a portion of

data from the second data stream into a first data stream); and a processing unit (610

in figure 6—paragraph 0044, lines 5-8, which can be used interchangeably with the

processing unit—470 of figure 4—paragraph 0043, lines 5-10) coupled to the first input

and the second input, characterized in that the processing unit (470 of figure 4) creates

a gap in the first data stream (T_{IN1}) for inserting at least a portion of data carried by the

second data stream (R) (470 in figure 4 creates a gap by detecting a null packet to

insert a portion of data carried by the second data stream—R into the first data

stream—T_{IN1}: the needed gap is a null packet for merging the two data streams—

paragraph 0038, lines 1-16), the gap being selected in a location in the first data

stream so as to allow the data carried by the second stream to be effectively displayed

without disrupting display of data carried by the first data stream (paragraph 0009, lines

12-17 and paragraph 0038, lines 13-16).

Bertram further discloses that the transport stream has one or more programs

(paragraph 0010, lines 1-4).

Bertram fails to disclose that the first and second data streams are for a particular television program.

In analogous art, Feinleib explicitly discloses a first data stream (primary content, main program that supports closed captioning—column 4, lines 15-22) and a second data stream (enhancing/interactive content used to enhance the primary content—column 5, lines 25-35) for a particular television program (primary content, main program—column 5, lines 45-56).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Bertram's system to include first and second data streams for a particular television program, as taught by Feinleib, for the benefit of utilizing enhancing content to enhance a particular television program—column 5, lines 45-56).

As for claim 2, it is rejected for the same reasons discussed in claim 1.

With regards to claim 3, it is rejected for the same reasons discussed in claim 1.

Regarding claim 4, Bertram discloses that the program stream can be interactively controlled by a user using consumer-friendly commands i.e., "PLAY" to display the interactive content, VOD—paragraph 0058, lines 1-13.

Bertram fails to explicitly disclose that a reveal command is inserted in the gap, the reveal command commanding a receiver to display the interactive content.

In analogous art, Feinleib discloses that a reveal command (supplemental data i.e., URL, trigger, or application name—column 8, lines 38-40) is inserted in the gap (embedded directly in the closed captioning script—column 9, lines 49-50), the reveal command (non-video data/ supplemental data in the VBI) commanding a receiver (104 of figure 6) to display the interactive content (column 12, lines 44-47 and column 11, lines 18-27 and 64-67).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Bertram's system to include a reveal command in the first program stream, as taught by Feinleib, for the benefit of activating the interactive content/enhancing content of the program (column 12, lines 44-47 and column 11, lines 18-27).

Considering claim 5, Bertram discloses an interactive television system (paragraph 0058, lines 4-13) comprising: a first input for receiving a first data stream having a plurality of first data units; a second input for receiving a second data stream having a plurality of second data units (T_{IN1} and T_{IN2} in figure 6--paragraph 0045, lines 1-7); and a processing unit (610 in figure 6—paragraph 0044, lines 5-8) coupled to the first input and the second input, the processing unit including logic for: creating a gap in

the first data stream (T_{IN1}) for inserting at least a portion of data carried by the second

data stream (R) (470 in figure 4 creates a gap by detecting a null packet to insert a

portion of data carried by the second data stream—R into the first data stream—T_{IN1}:

the needed gap is a null packet for merging the two data streams—paragraph 0038,

lines 1-16); inserting a first portion of the plurality of second data units into the created

gap (paragraph 0038, lines 1-16); detecting another gap in the first data stream; and

electronically inserting a second portion of the plurality of second data units into the

detected gap (paragraph 0012, lines 13-16). Bertram further discloses that the

transport stream has one or more programs (paragraph 0010, lines 1-4).

Bertram fails to disclose that the first and second data streams are for a

particular television program.

In analogous art, Feinleib explicitly discloses a first data stream (primary content,

main program that supports closed captioning—column 4, lines 15-22) and a second

data stream (enhancing/interactive content used to enhance the primary content—

column 5, lines 25-35) for a particular television program (primary content, main

program—column 5, lines 45-56).

It would have been obvious to one of ordinary skill in the art at the time the

invention was made to modify Bertram's system to include first and second data

streams for a particular television program, as taught by Feinleib, for the benefit of

utilizing enhancing content to enhance a particular television program—column 5, lines
45-56).

As for claim 6, it is rejected for the same reasons discussed in claim 1.

With regards to claim 7, it is rejected for the same reasons discussed in claim 1.

Regarding claim 8, it is met by the combination of Bertram and Feinleib. In
particular, Bertram discloses that the created and detected gaps are time slots in a
television signal containing no data units (Bertram discloses that the controllers
(processing units) of figure 4 and figure 6 may be interchanged. Therefore, the created
and detected gaps are NULL packets assigned to certain time slots containing no
data—paragraph 0034, lines 6-11).

Considering claim 9, it is met by the combination of Bertram and Feinleib. In
particular, Bertram discloses that the created gap is as close to a desired reveal time
as possible (paragraph 0038, lines 13-15).

As for claim 10, it is rejected for the same reasons discussed in claim 4.

Regarding claim 17, it is rejected for the same reasons discussed in claim 5.

Considering claim 18, it is rejected for the same reasons discussed in claim 2.

As for claim 19, it is rejected for the same reasons discussed in claim 3.

With regards to claim 20, it is rejected for the same reasons discussed in claim 8.

Regarding claim 21, it is rejected for the same reasons discussed in claim 9.

Considering claim 22, it is rejected for the same reasons discussed in claim 4.

3.   Claims 11 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bertram (US 2002/0064177) in view of Feinleib (US 6,637,032), as applied to claims 5 and 17 above, and further in view of Landis (US 5,428,400).

With regards to claim 11, Bertram and Feinleib disclose MPEG data transmission (payload data in an MPEG packet is inherent because it is the nature of a packet to have a header and a payload). Bertram and Feinleib further disclose revealed closed captioning data (Feinleib—column 7, lines 5-32).

Bertram and Feinleib fail to explicitly disclose closed caption reveal command data.

In analogous art, Landis discloses closed caption reveal command data (column 4, lines 46-51).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the combined system of Bertram and Feinleib to include closed caption reveal command data, as taught by Landis, for the benefit of commanding the display of closed caption data (column 4, lines 46-51).

As for claim 23, it is rejected for the same reasons discussed in claim 11.

4.   Claims 12 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bertram (US 2002/0064177) in view of Bauchot (US 6,141,336).

Considering claims 12 and 24, Bertram discloses an interactive television system (paragraph 0058, lines 4-13) comprising: a first input for receiving a first data stream; a second input for receiving a second data stream (T_{IN1} and T_{IN2} in figure 6--paragraph 0045, lines 1-7); and a processing unit (610 in figure 6—paragraph 0044, lines 5-8) coupled to the first input and the second input.

Bertram fails to disclose that the processing unit includes logic for: identifying time slots assigned to the plurality of first data units in the first data stream; reassigning a portion of the plurality of first data units assigned to particular time slots to earlier time slots; and assigning at least a portion of the plurality of second data units in the second data stream to the particular time slots.

In analogous art, Bauchot discloses a processing unit (master scheduler—29 in figure 1) including logic for: identifying time slots assigned to the plurality of first data units in the first data stream (column 5, lines 32-37); reassigning a portion of the plurality of first data units assigned to particular time slots to earlier time slots; and assigning at least a portion of the plurality of second data units in the second data stream to the particular time slots (see figure 5—time slots are identified and a portion of the plurality of the first data units, "X X", are shifted left: reassigned to earlier time slots, and a new cell, " * ", and an "overhead": a portion of the plurality of the second data units, are assigned to the particular time slots).

It would have been obvious to one of ordinary skill in the art to modify Bertram's system to include a reassignment of a portion of data, as taught by Bauchot, for the benefit of allocating cells of data to particular time slots according to their transmission priority (column 7, lines 18-32).

5.   Claims 13-15 and 25-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bertram (US 2002/0064177) in view of Bauchot (US 6,141,336), as applied to claims 12 and 24 above, and further in view of Feinleib (US 6,637,032).

Claims 13 and 25 are rejected for the same reasons discussed in claims 1 and 2.

Claims 14 and 26 are rejected for the same reasons discussed in claims 1 and 3.

Claims 15 and 27 are rejected for the same reason discussed in claim 10.

6.   Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bertram (US 2002/0064177) and Bauchot (US 6,141,336) in view of Feinleib (US 6,637,032), as applied to claim 13 above, and further in view of Landis (US 5,428,400).

Claim 16 is rejected for the same reasons discussed in claim 11.

7.   Claim 28 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bertram (US 2002/0064177) in view of Bauchot (US 6,141,336), as applied to claim 24 above, and further in view of Landis (US 5,428,400).

Considering claim 28, Bertram and Bauchot disclose an interactive television system (Bertram—paragraph 0058, lines 4-13).

Bertram and Bauchot fail to explicitly disclose closed caption reveal command data.

In analogous art, Landis discloses closed caption reveal command data (column 4, lines 46-51).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the combined system of Bertram and Bauchot to include closed caption reveal command data, as taught by Landis, for the benefit of commanding the display of closed caption data (column 4, lines 46-51).

Allowable Subject Matter

4.   Claims 29 and 30 are allowed.

Referring to all of the independent claims, the prior art of record fails to anticipate or rendered obvious "an interactive television system, a method for merging a closed caption data stream and an ITV data stream, <u>the closed caption data stream including closed caption reveal command data and closed caption payload data, and an ITV data stream including ITV reveal command data and ITV payload data... identifying an ITV reveal time slot for the ITV reveal command data,......determining whether the ITV reveal time slot is available,......reassigning the segmented closed captioning payload data to one or more time slots earlier than the ITV reveal time slot; and assigning the ITV reveal time slot to the ITV reveal command data</u>", as recited in the claims.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably

accompany the issue fee. Such submissions should be clearly labeled "Comments on

Statement of Reasons for Allowance."

Specifically, Feinleib discloses an interactive television (ITV) system (column 4,

lines 29-42), a method for merging a closed caption data stream and an ITV data

stream (column 4, lines 12-22). Further, Bertram discloses an interactive television

(ITV) system (paragraph 0058, lines 4-13) comprising: a first input for receiving a first

data stream; a second input for receiving a second data stream (T_{IN1} and T_{IN2} in figure

6--paragraph 0044, lines 1-5); the first data stream having a higher priority than the

second data stream (the priority is predefined: merging two data streams by inserting a

portion of data from the second data stream into a first data stream). In addition, Landis

discloses closed caption reveal command data (column 4, lines 46-51) and Bauchot

discloses a processing unit (master scheduler—29 in figure 1) including logic for:

identifying time slots assigned to the plurality of first data units in the first data stream

(column 5, lines 32-37). However, Feinleib, Bertram, Landis and Bauchot alone or in

combination fail to disclose "an interactive television system, a method for merging a

closed caption data stream and an ITV data stream, the closed caption data stream

including closed caption reveal command data and closed caption payload data, and an

ITV data stream including ITV reveal command data and ITV payload data... identifying

an ITV reveal time slot for the ITV reveal command data,......determining whether the

ITV reveal time slot is available,......reassigning the segmented closed captioning

payload data to one or more time slots earlier than the ITV reveal time slot; and

assigning the ITV reveal time slot to the ITV reveal command data".

(10) Response to Argument

1.   In response to appellants' argument (page 4, 3rd paragraph) that Bertram's

transport multiplexer does not create any gaps in either the first data stream or a

multiplexed output data stream, appellants should first note that Bertram's first data

stream does **NOT** come with preexisting gaps but with preexisting NULL packets. Said

gap is only created upon removing the NULL packet to insert the desired replacement

packet. Bertram explicitly discloses that the replacement packet R is to be inserted into

the output stream *instead* of the NULL packet (paragraph 0038, line 1-12). The NULL

packet is removed thereby creating the needed gap to insert data carried by the second

data stream. Therefore, Bertram clearly teaches the creation of a gap in the first data

stream (T_{IN1}) for inserting at least a portion of data carried by the second data stream

(T_{IN2}) (paragraph 0038, line 1-16).

2.   In response to appellants' argument (page 4, 4th paragraph) that Bertram fails to

teach or even suggest that the disclosed first and second transport streams which are

multiplexed together are for the same "particular television program", appellants should

note that the Examiner has clearly stated that it is *Feinleib* who discloses the claimed

limitation and not Bertram (11/15/05 Final Office Action, p. 6).

3.   In response to appellants' argument (page 5, 3rd paragraph) that there is no

suggestion to combine Bertram and Feinleib, the examiner recognizes that obviousness

can only be established by combining or modifying the teachings of the prior art to

produce the claimed invention where there is some teaching, suggestion, or motivation

to do so found either in the references themselves or in the knowledge generally

available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5

USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed.

Cir. 1992). In this case, the cited benefit of utilizing enhancing content to enhance a

particular television program as expressly recited in Feinleib, see column 5, lines 25-56.

Therefore, the combination of Bertram and Feinleib is proper. (Please see the multiple

examples of enhancing a primary content, television program, in Feinleib, column 5, line

45 – column 6, line 22).

4.   In response to appellants' argument (page 6, 5th paragraph and page 7, 5th

paragraph) that the Examiner has failed to establish a prima facie case of obviousness

in that first, Bauchot is not analogous art, and second that the combination would render

Bertram's system unsatisfactory.

       In response to appellants' argument that **Bauchot is nonanalogous art,** it has

been held that a prior art reference must either be in the field of applicant's endeavor or,

if not, then be reasonably pertinent to that particular problem with which the applicant

was concerned, in order to be relied upon as a basis for rejection of the claimed

invention. See *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). In this

case, Bauchot, like Bertram, pertains to the field of transmitting information from one

point to another (i.e. in the field of applicant's endeavor). Furthermore, Bauchot

discloses in column 11, lines 39-46, that the invention is applicable to any network.

In response to appellants' argument that **the combination would render**

Bertram's system unsatisfactory, the test for obviousness is not whether the features

of a secondary reference may be bodily incorporated into the structure of the primary

reference; nor is it that the claimed invention must be expressly suggested in any one or

all of the references. Rather, the test is what the combined teachings of the references

would have suggested to those of ordinary skill in the art. See *In re Keller*, 642 F.2d

413, 208 USPQ 871 (CCPA 1981). Furthermore, Bauchot was simply introduced to

teach manipulating data units assigned to particular time slots in data streams (see

figure 5 and column 5, lines 32-37).

Bauchot was simply introduced to teach manipulating data units assigned to

particular time slots in data streams (see figure 5 and column 5, lines 32-37).

Manipulating data units include the steps of identifying time slots assigned to the

plurality of first data units in the first data stream; reassigning a portion of the plurality of

first data units assigned to particular time slots to earlier time slots; and assigning at

least a portion of the plurality of second data units in the second data stream to the

particular time slots. Furthermore, Bauchot's teaching of reassigning a portion of the

plurality of first data units assigned to particular time slots to earlier time slots is not

limited to a program stream: one program. Feinleib was introduced to teach that the

first and second data streams are for the same particular television program. The

plurality of data units reassigned to earlier time slots in Bauchot could be independent

program packets, in which case the relative position of each packet associated with a

particular program remains the same with respect to the other packets **within the**

program, as taught by Bertram—paragraph 0025, lines 5-7, and therefore the

combination is proper.

In conclusion, the Examiner has provided a prima facie case of obviousness by

establishing the three basic criteria as follows:

First, the Examiner provided suggestions or motivation to combine the references

as described above.

Secondly, one of ordinary skill in the art would reasonably expect the

combination of Bertram and Bauchot to succeed because:

(i) Both systems are directed to the field of transmitting information from one

point to another (i.e. in the field of applicant's endeavor) and

(ii) Taking the basic concept of merging two data streams and allocating cells of

data to particular time slots according to their transmission priority as taught by the

combined cited prior art is sufficient basis for reasonable expectation of success

(Bauchot—column 7, lines 18—32).

Thirdly, the Examiner indicated that the prior art references teach all the claimed

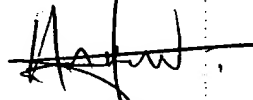limitations (with the exception of limitations claimed in claims 29 and 30).

5.   In response to appellants' argument (page 9, 3rd paragraph) that nothing in

Bertram teaches or suggests that reveal commands are included in the programs

streams, appellants should note that it is the combination of Bertram and Feinleib that

teach the claimed limitation and not Bertram alone (please see claim 4 rejection).

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the

Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.
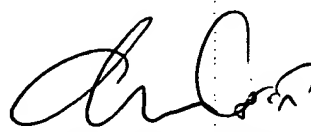
Respectfully submitted,

Harun Yimam
Patent Examiner
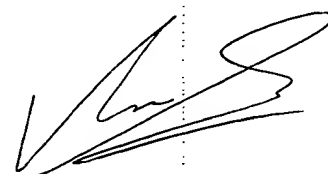Art Unit 2623

August 04, 2006

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